Amendments to the Drawings:

The attached sheets of drawings include changes to Fig. 5, and new Figs. 6 and 7, which are included on the same drawing sheet. The sheet of drawing with respect to Fig. 5 replaces the original sheet of Fig. 5. In Fig. 5, cross-section references made with respect to one channel 605 are now included, one designation for the cross-sectional view of Fig. 6 and one for the cross-sectional view of Fig. 7.

Attachment: Replacement Sheet for Fig. 5
Annotated Sheet Showing Changes for Fig. 5
New Drawing Sheet – Figs. 6 and 7

REMARKS/ARGUMENTS

Drawings

In the Office Action, Examiner objected to the drawings under 37 CFR 1.83(a), stating that the claimed feature involving the plurality of channels having a depth that gradually reduces along its extent is not shown by the drawings. Such feature finds support in paragraph [0043] in Applicant's specification. Figures 6 and 7, which are cross sections of a channel 605 of Figure 5, are now added in light of paragraph [0043] to embody how the depth of the channel 605 is reduced along its extent. No new matter is provided through the addition of these drawings. Thus, Applicant respectfully requests Examiner remove the objection to the drawings.

Claim Rejections

In the Office Action, Examiner rejected claims 21, 23, 24, 31-33, and 35-42 under 35 U.S.C. 103(a) as being unpatentable over Aschner et al. (U.S. Pat. No. 6,005,226) in view of Dunham (U.S. Pat. No. 5,106,204); rejected claims 21, 22, 25, 27-29, and 32-42 under 35 U.S.C. 102(b) as being anticipated by Burk, Jr. (U.S. Pat. No. 5,788,777); rejected claims 21, 22, 25, 27, 28, and 31-42 under 35 U.S.C. 102(e) as being anticipated by Paisley et al. (U.S. Pub. No. 2002/0090454); and rejected claim 26 under 35 U.S.C. 103(a) as being unpatentable over Paisley et al. Applicant respectfully traverses the above 103(a), 102(b), and 102(e) rejections.

Applicant would like to make a few initial comments. In both the 102(b) and 102(e) rejections of claim 21, Examiner references the teachings of Dunham to be used in combination with the primary cited reference, thereby making the claimed invention obvious to one of ordinary skill in the art. In light of Examiner's reasoning, Applicant believes such rejections should instead be characterized as 103(a) rejections similar to Examiner's 103(a) rejection of claim 21 based on Aschner in view of Dunham. In turn, the further rejections with respect to the dependent claims of claim 21 which stem from these 102(b) and 102(e) rejections should also be characterized as 103(a) rejections.

In addition, claims 28-30 were previously cancelled. As such, Applicant does not understand Examiner's current-standing rejections made to these previously cancelled claims.

103(a) rejections

In Examiner's 103(a) rejection of claim 21, Aschner is characterized as including the limitations of claim 21 except for the teaching that each of the channels has a depth that gradually reduces along its extent, citing Figs. 4-6 in Aschner. Examiner characterizes Dunham as teaching "a high unit load gas bearing comprising a bearing base 42 with channels 32 [having] a depth that is reduced along the extent of the clearing space 37", with reference to Fig. 4. In turn, Examiner asserts that it would be obvious to one of ordinary skill in the art to modify the channels of Aschner to have a depth that gradually reduces along its extent.

Examiner's rejection fails for many reasons. To begin with, Applicant respectfully disagrees with Examiner's characterization of Dunham. Applicant asserts that one cannot accurately characterize what is shown by the cross-sectional view of Fig. 4 without looking at the apparatus that Fig. 4 is a cross section of. Such apparatus, a circular thrust bearing pad 30, is shown in Fig. 4-A. Clearly, what is shown in Fig. 4-A (and described in the specification of Dunham) does not correspond with what Examiner has described with respect to Fig. 4. Reference number 32 is not referenced as a channel by Dunham, but rather a land area, which overlays a thick region of material 42. (Dunham, col. 6, lines 49-50). A clearance space 37 between the land area 32 and the supported bearing surface 48, with reference to Fig. 4-A, is not any kind of channel, but instead a space that fully extends around both a centrically-located port 40 and a recess area 34. In turn, the clearance area 37 forms a ring, enabling air to flow from the port 40 into the recess area 34, and subsequently allowed to flow across the land area 32 in any direction. As such, the clearance area 37 provides no channeling function with respect to the gas flowing from the recess area 34. This is probably why Dunham does not reference the clearance space 37 as a channel. Thus, one of ordinary skill in the art would not logically look to Dunham to modify the channels of Aschner to have a depth that gradually reduces along its extent because the element of a channel is entirely lacking in Dunham.

Even assuming, arguendo, that the clearance area 37 of Dunham is a channel, claim 21 requires a plurality of channels. The plurality of channels in Applicant's apparatus is warranted to facilitate rotation of the support. While Aschner teaches providing a plurality of channels to enable rotation of a support, Dunham teaches neither a plurality of channels nor a rotating support. Thus, what would cause one of ordinary skill in the art to use Dunham in combination

with Aschner to achieve increased rotation of the support, except from what has been gathered from Applicant's disclosure via impermissible hindsight?

In addition, claim 21 requires the channels being in communication with a chamber defined between the element and the support, with the channels being of a shape and size such that *gas that is present in the chamber flows through the channels*. Fig. 5 of Applicant's disclosure shows an elevated view of such chamber 604, where gas flows out of the chamber 604 into the plurality of channels 605. While Figs. 4-6 of Aschner each show a chamber being formed between the element and support, Aschner teaches gas to flow from the channels and into the chamber (as indicated by the arrows), and not from the chamber and into the channels, as required by claim 21. As such, Aschner appears to teach away from Applicant's claimed invention. Thus, one of ordinary skill in the art would be unlikely to look to Aschner as a primary reference in an obviousness rejection.

Further, claim 21 requires *a plurality of channels, each of which is defined between the stationary base element and the rotatable support*. Fig.4 of Applicant's disclosure shows a cross sectional view of the slide or base element 600 and of the support 610, showing one channel 605 being defined therebetween. Further, Fig. 5 of Applicant's disclosure shows the plurality of channels 605. In contrast, Aschner shows *channels being formed through the base element* in each of Figs. 4-6. As such, Applicant asserts that the channels of Aschner are not defined between the element and the support, which further teaches away from Applicant's claimed invention, thereby further supporting that one of ordinary skill in the art would be unlikely to look to Aschner as a primary reference in an obviousness rejection.

102(b) rejections

In the 102(b) rejection, Examiner characterizes Burk, Jr. as including the limitations of claim 21 except for the teaching that each of the channels has a depth that gradually reduces along its extent. As can be appreciated, the teachings of Dunham are being used by Examiner in this rejection for the same purpose as used in combining Dunham with Aschner in forming the 103(a) rejection. Based on this, Applicant's respectfully disagrees with Examiner's characterization of the teachings of Dunham, and in turn, Examiner's combination of Dunham with Burk, Jr. for the same reasons as already described above.

In brief, one of ordinary skill in the art would not logically look to Dunham to modify the channels of Burk, Jr. to have a depth that gradually reduces along its extent because the element of a channel is entirely lacking in Dunham. Even assuming, arguendo, that the clearance area 37 of Dunham is a channel, claim 21 requires a plurality of channels. The plurality of channels in Applicant's apparatus is warranted to facilitate rotation of the support. While Burk, Jr. teaches providing a plurality of channels to enable rotation of a support, Dunham teaches neither a plurality of channels nor a rotating support. Thus, what would cause one of ordinary skill in the art to use Dunham in combination with Burk, Jr. to achieve increased rotation of the support, except from what has been gathered from Applicant's disclosure via impermissible hindsight?

In addition, claim 21 requires *a plurality of channels, each of which is defined between the stationary base element and the rotatable support*. Fig.4 of Applicant's disclosure shows a cross sectional view of the slide or base element 600 and of the support 610, showing one channel 605 being defined therebetween. Further, Fig. 5 of Applicant's disclosure shows the plurality of channels 605. In contrast, Burk, Jr. shows *channels 100 being formed through the base element*, e.g., in Figs. 4 and 5. As such, Applicant asserts that the channels of Burk, Jr. are not defined between the element and the support, which is a clear difference between Burk, Jr. and Applicant's claimed invention. As such, Burk, Jr. does not anticipate claim 21.

102(e) rejections

In the 102(e) rejection, Examiner characterizes Paisley as including the limitations of claim 21 except for the teaching that each of the channels has a depth that gradually reduces along its extent. As can be appreciated, the teachings of Dunham are being used by Examiner in this rejection for the same purpose as used in combining Dunham with Aschner in forming the 103(a) rejection and in referencing Dunham in light of Burk, Jr. in forming the 102(b) rejection. Based on this, Applicant's respectfully disagrees with Examiner's characterization of the teachings of Dunham, and in turn, Examiner's combination of Dunham with Paisley for the same reasons as already described above.

In brief, one of ordinary skill in the art would not logically look to Dunham to modify the channels of Paisley to have a depth that gradually reduces along its extent because the element of a channel is entirely lacking in Dunham. Even assuming, arguendo, that the clearance area 37 of Dunham is a channel, claim 21 requires a plurality of channels. The plurality of channels in

Applicant's apparatus is warranted to facilitate rotation of the support. While Paisley teaches providing a plurality of channels to enable rotation of a support, Dunham teaches neither a plurality of channels nor a rotating support. Thus, what would cause one of ordinary skill in the art to use Dunham in combination with Paisley to achieve increased rotation of the support, except from what has been gathered from Applicant's disclosure via impermissible hindsight?

In light of the above, Applicant asserts that the present 103(a), 102(b), and 102(e) rejections with respect to claim 21 have been overcome, thereby placing claim 21 in condition for allowance. As such, the allowance of claim 21 as described and shown above thereby renders claims 22-27 and 31-42 also allowable.

New claim

Claim 43 has been added and is believed to be patentable in light of the references cited by Examiner.

Applicant believes that no new matter is introduced by entry of these amendments and that the amendments are fully supported by the specification and application as a whole. Applicant submits that the present rejections should be withdrawn and prompt allowance of this application is respectfully requested. If the Examiner feels that prosecution of the present application can be materially advanced by a telephonic interview, the undersigned would welcome a call at the number listed below.

Respectfully submitted,

Dated: 5/21/07

John S. Pardych
Reg. No. 52,097

Customer No. 022859
Fredrikson & Byron, P.A.
200 South Sixth Street, Suite 4000
Minneapolis, MN 55402-1425 USA
Telephone: (612) 492-7279
Facsimile: (612) 492-7077

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